

Work Order ID 81521

March-15-12 8:43:43 AM

81521

Page 1

Item ID: D350-748-201

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Crosstube Installation, High Aft

Start Date: 15/03/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 04/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

MLJ

Date: 12/03/15 Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

Draw Nbr

Revision Nbr

D350-748-241

F

100

100

DC

Document Control

DOCUMENT CONTROL

Memo

Photocopy bluefile & type labels per PPPD350-748-201 CHG002

0.00

0.00

110

110

CNC Bend 2

CNC Alpha 160 Bender

BENDING MACHINE - CROSSTUBES

Memo

Bend tube as per Dwg D350-748-241 using CNC bender program D350A and Folio FT _____

0.00

0.00

120

120

QC

Quality Control

QC15- Crosstube Dimensional Check

Memo

0.00

0.00

SCRAP

Scrap

TW
AM

12-4-3

| W/O: 81521 | | WORK ORDER CHANGES | | | | | |
|------------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: D350-748-201 PAR #: _____ Fault Category: X-tube NCR: Yes No DQA: OK Date: 12/05/04
 Resolution: Scrap Disposition: Scrap QA: N/C Closed: OK Date: 12/5/04

| NCR: 12-1398 | | WORK ORDER NON-CONFORMANCE (NCR) 2884.53 | | | | | | |
|--------------|------|--|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| 12.04.23 | 110 | Tube buckled during bending | W 12/5/02 | Scrap CP 12.04.23 | Rm 12-5-2 | TW 12-05-02 | W 12/5/02 | S 12/5/02 |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

81521

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N900040100

Setup Start *NS1*

Stop ***NS2***

Customer:

Run Start *NR1*

Stop ***NR2***

NR2

| | |
|-----|------|
| 125 | 0.00 |
|-----|------|

0.00

Memo

Stress relief

Heat treat crosstube as per QSI010 4.3

Temp:_____

Start time: _____

Finish time: _____

| | |
|---|------|
| QC5- Inspect part completeness to step on W/O | 0.00 |
|---|------|

0.00

Memo

Quality Control

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

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N900040100

Setup Start *NS1*

Stop ***NS2***

Start Date: 15/03/2012 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 04/04/2012 **Req'd Qty:** 1.00 *** 1 ***

Customer:

Reference:

Approvals: _____ **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

[illegible]

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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NOTE: Date & initial all entries

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N900040100

Setup Start *NS1*

Stop *NS2*

Stop *NS2*

Start Date: 15/03/2012 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 04/04/2012 **Req'd Qty:** 1.00 *** 1 ***

Customer:

Reference:

Approvals: **Process Plan:** **Date:** **Tooling:** **Date:**

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop *NR2*

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

| | | |
|-----|---|------|
| 150 | Outsource process-Cadplate per QSI017 4.1.9.1 | 0.00 |
|-----|---|------|

150

| | | |
|------------|------|------|
| Outsource3 | Memo | 0.00 |
|------------|------|------|

Outsource process - Cad plate

Memo 0.00
Issue P/O: _____
Stress relief at 375° for 5 hours
Magnetic Particle Inspect per ASTM E1444
Cadmium Plate per AMS-QQ-P-416B, Class 1, Type 2
Embrittle relief at 375° for 8 hours, Chromate Treat
Possible Supplier: Southwest United Industries
Ensure Certificate of Conformity is attached

| | | |
|-----|--|------|
| 160 | Receive & Inspect for Damage & Mat'l Certs | 0.00 |
|-----|--|------|

160

| | | |
|-----------|------|------|
| Packaging | Memo | 0.00 |
|-----------|------|------|

| | |
|-----------|--|
| Packaging | Ensure certificate of conformity is attached |
|-----------|--|

| | | |
|-----|---|------|
| 170 | QC5- Inspect part completeness to step on W/O | 0.00 |
|-----|---|------|

170

| | | |
|----|------|------|
| QC | Memo | 0.00 |
|----|------|------|

Quality Control

Dart Aerospace Ltd

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

Work Order ID 81521***81521***

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March-15-12 8:43:43 AM

Item ID: D350-748-201

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Crosstube Installation, High Aft

Start Date: 15/03/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 04/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:
QC: Date: SPC (Y/N): Date:

Run Start ***NR1***Stop ***NR2***

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|---|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 180 | | 0.00 | | | | | | | |
| *180* | SprayPaint | | | | | | | | |
| SprayPaint | Memo | 0.00 | | | | | | | |
| Spray Painting | 1-Prime inside crosstube as per QSI 005 4.2 2-Paint Outside of Tube as per Dart QSI 005 4.2 | | | | | | | | |
| 190 | | 0.00 | | | | | | | |
| *190* | QC14- Inspect Spray Paint | | | | | | | | |
| QC | Memo | 0.00 | | | | | | | |
| Quality Control | Then, Wrap in plastic bag to protect from scratches | | | | | | | | |
| 200 | | 0.00 | | | | | | | |
| *200* | Crosstubes | | | | | | | | |
| Crosstubes | Memo | 0.00 | | | | | | | |
| Crosstubes | 1-Install Ground wire Insert, then insert screw and washer 2-Install Abrasion strips as per Dwg D350-748-241 & QSI 035. 3-Install supports Using Dt8876 as per Dwg D350-748-241, Torque to 60-80 IN-LBS | | | | | | | | |

Dart Aerospace Ltd

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
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NOTE: Date & initial all entries

81521

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N900040100

Setup Start *NS1*

Stop ***NS2***

Start Date: 15/03/2012 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 04/04/2012 **Req'd Qty:** 1.00 *** 1 ***

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

| | | |
|-----|---|------|
| 210 | QC5- Inspect part completeness to step on W/O | 0.00 |
|-----|---|------|

210

| | | |
|----|------|------|
| QC | Memo | 0.00 |
|----|------|------|

Quality Control

| | | |
|-----|----------|------|
| 220 | Pick Kit | 0.00 |
|-----|----------|------|

220

| | | |
|-----------|------|------|
| Packaging | Memo | 0.00 |
|-----------|------|------|

Packaging

| | | |
|-----|---|------|
| 230 | QC4- 100% Inspect kits for completeness | 0.00 |
|-----|---|------|

230

| | | |
|----|------|------|
| QC | Memo | 0.00 |
|----|------|------|

Quality Control

Dart Aerospace Ltd

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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NOTE: Date & initial all entries

Work Order ID 81521

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Item ID: D350-748-201

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Crosstube Installation, High Aft

Start Date: 15/03/2012 Start Qty: 1.00

1

Cust Item ID:

Required Date: 04/04/2012 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***

Stop ***NR2***

| Sequence ID/ Work Center ID | Operation Description | Set Up/ Run Hours | Tool ID | Tool # | Plan Code | Accept Qty | Reject Qty | Reject Number | Insp. Stamp |
|--------------------------------|--|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
| 240 | Packaging | 0.00 | | | | | | | |
| *240* | | | | | | | | | |
| Packaging | Memo | 0.00 | | | | | | | |
| Packaging | Identify and pack for shipping as per PPPD350-748-201 Location: _____ PPP Rev: _____ | | | | | | | | |
| 250 | QC21- Final Inspection - Work Order Release | 0.00 | | | | | | | |
| *250* | | | | | | | | | |
| QC | Memo | 0.00 | | | | | | | |
| Quality Control | | | | | | | | | |

W 1205.02

Dart Aerospace Ltd

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

March-15-12 8:43:47 AM

81521

Parent Item: D350-748-201

D350-748-201

Parent Item Name: Crosstube Installation, High Aft

Start Date: 15/03/2012

Required Date: 04/04/2012

Start Qty: 1.00

Required Qty: 1.00

IPP Rev: A New Issue 06-07-05 JLM

IPP Rev: B Update qty of MS21042L5 06-09-12 KJ

IPP Rev C Combined manufacturing 08.04.02 EC verified by: DD

IPP Rev:D 08-06-24 revD as per dwg DD verified by:EC

IPP Rev: E 08.12.11 Step17 was step 21 KJ Verified by:EC IPP Rev:F

10.08.04 added QSI010 4.3 DD verf:EC

| Component Item ID/ Item Name | Replacement Item ID | Mfg/ Purch | Bin Item | Primary Location | Last Location | Route Seq ID | Unit of Measure | Qty on Hand | Qty per Kit | Total Qty | Qty Issued | Date Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|-----------------|-------------|--------------|---------------|----------------|--------|
| D350-748-241TRN | | Manufactured | No | B73374 | | 110 | Each | 0.0000 | 1 | 1 | | 12-4-3 | |
| *D350-748-241TRN* | | | | | | | | | | | | | |
| Crosstube Turning Detail | | | | | | | | | | | | | |
| ALS4-1032-225 | | Purchased | No | | | 200 | Each | 1,102.000 | 1 | 1 | | | |
| *ALS4-1032-225* | | | | | | | | | | | | | |
| Insert | | | | | | | | | | | | | |
| | | | | <u>Location</u> | | <u>Loc Qty</u> | | <u>Loc Code</u> | | | | | |
| | | | | ST281 | | 1019 | | | | | | | |
| | | | | 108696 | | 146 | | | | | | | |
| | | | | 110768 | | 62 | | | | | | | |
| | | | | 118386 | | 55 | | | | | | | |
| | | | | 118966 | | 68 | | | | | | | |
| | | | | 120671 | | 688 | | | | | | | |
| | | | | ST282 | | 83 | | | | | | | |
| | | | | 120410 | | 70 | | | | | | | |
| | | | | 120451 | | 13 | | | | | | | |
| AN960JD10 | NAS1149D0363J | Purchased | No | | | 200 | Each | 0.0000 | 1 | 1 | | | |
| *AN960JD10* | | | | | | | | | | | | | |
| Washer | | | | | | | | | | | | | |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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NOTE: Date & initial all entries

Picklist Print

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Work Order ID: 81521

81521

Parent Item: D350-748-201

D350-748-201

Parent Item Name: Crosstube Installation, High Aft

Start Date: 15/03/2012

Required Date: 04/04/2012

Start Qty: 1.00

Required Qty: 1.00

D2856-400 Manufactured No

200 f

199.5445

1.181

1.243158

D2856-400

Abrasion Strip

Location

Loc Qty

Loc Code

ST409

199.5445

63735

0.6696

68076

0.3149

71164

8.46

79551

190.1

1- cut as per dwg D2856

D3502-1

Manufactured No

200

Each

39.0000

2

2

D3502-1

Support

Location

Loc Qty

Loc Code

ST051

39

73419

19

74873

20

MS21920-20

Purchased No

200

Each

60.0000

2

2

MS21920-20

Clamp (per MIL-DTL-8783C)

Location

Loc Qty

Loc Code

LG050

60

116799

8

120475

2

120676

50

Dart Aerospace Ltd

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Picklist Print

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Work Order ID: 81521

81521

Parent Item: D350-748-201

D350-748-201

Parent Item Name: Crosstube Installation, High Aft

Start Date: 15/03/2012

Required Date: 04/04/2012

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-10

Purchased

No

200

Each

258.0000

1

1

MS27039-1-10

Screw

Location

Loc Qty

Loc Code

GA

100

120449

100

ST291

158

120120

158

AN4-41A

Purchased

No

220

Each

387.0000

8

8

AN4-41A

Bolt

Location

Loc Qty

Loc Code

ST360

387

115108

3

115705

7

117619

27

118451

50

118838

50

119328

100

120423

150

AN4-6A

Purchased

No

220

Each

1,649.000

16

16

AN4-6A

Bolt

Location

Loc Qty

Loc Code

ST356

1649

119017

1649

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Picklist Print

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Work Order ID: 81521

81521

Parent Item: D350-748-201

D350-748-201

Parent Item Name: Crosstube Installation, High Aft

Start Date: 15/03/2012

Required Date: 04/04/2012

Start Qty: 1.00

Required Qty: 1.00

AN5-32A Purchased No 220 Each 256.0000 4 4

AN5-32A

Bolt

Location

Loc Qty

Loc Code

ST339

256

119328

100

119862

50

120423

75

120717

1

120910

30

AN960JD416 NAS1149D0463J Purchased No 220 Each 14.0000 32 32

AN960.ID416

Washer

Location

Loc Qty

Loc Code

ST351

14

116289

14

AN960JD516 NAS1149D0563J Purchased No 220 Each 0.0000 8 8

AN960.ID516

Washer

D3500-1 Manufactured No 220 Each 35.0000 4 4

D3500-1

Saddle

Location

Loc Qty

Loc Code

ST424

35

73406

8

76000

27

Dart Aerospace Ltd

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

Picklist Print

Page 5

March-15-12 8:43:47 AM

Work Order ID: 81521

81521

Parent Item: D350-748-201

D350-748-201

Parent Item Name: Crosstube Installation, High Aft

Start Date: 15/03/2012

Required Date: 04/04/2012

Start Qty: 1.00

Required Qty: 1.00

D3501-1 Manufactured No

220 Each 361.0000 16 16

D3501-1

Bushing

Location

Loc Qty

Loc Code

ST051

361

67757

4

70682

83

73391

6

74866

207

77033

61

MS21042L4 Purchased No

220 Each 5,585.000 24 24

MS21042L 4

Nut

Location

Loc Qty

Loc Code

ST300

5585

117441

51

117601

157

117885

16

118451

133

119017

232

119075

2996

121011

2000

MS21042L5 Purchased No

220 Each 1,602.000 4 4

MS21042L 5

Nut

Location

Loc Qty

Loc Code

ST300

1602

116105

5

116548

43

117611

42

118179

12

119109

1500

March-15-12 8:43:47 AM

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Page 5

| W/O: | | WORK ORDER CHANGES | | | | | |
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| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

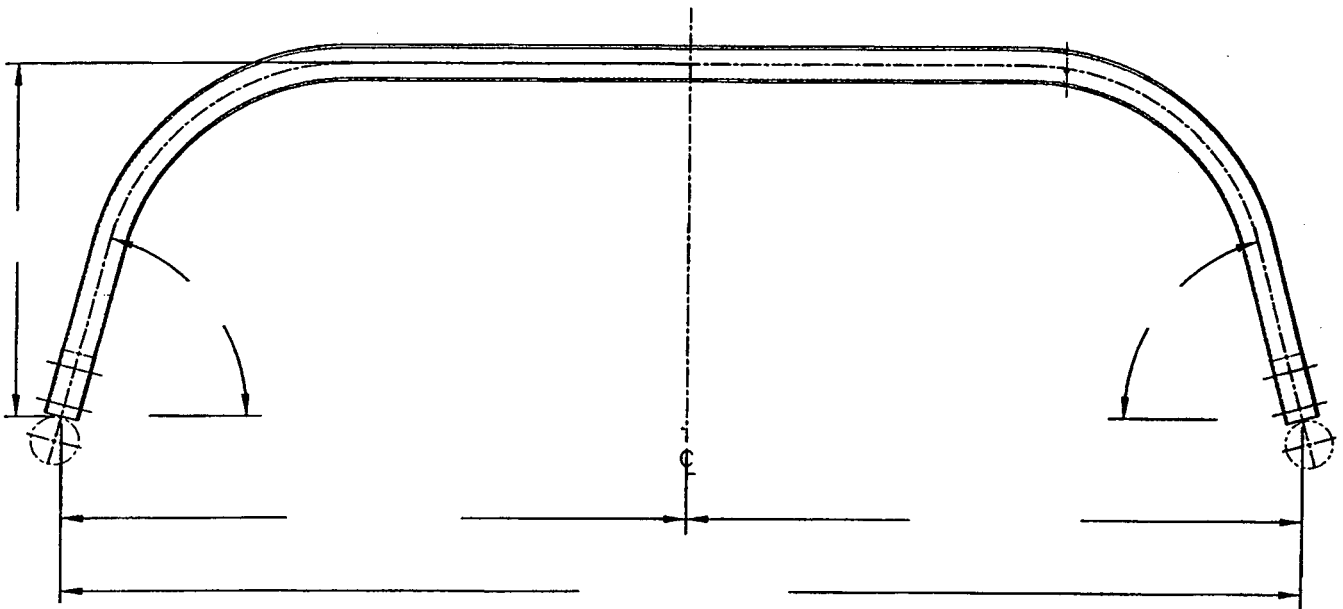
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NOTE: Date & initial all entries

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| DART AEROSPACE LTD | | Work Order: | 81521 |
| Description: Crosstube High Aft (AS350/355) | | Part Number: | D350-748-201 |
| Inspection Dwg: D350-748-241 Rev: E | | Page 1 of 1 | |

| Required Dimension | Min | Max |
|--------------------|-------|-------|
| Height | 31.22 | 31.48 |
| 1/2 Span | 40.77 | 41.03 |
| Angle | 75 | 77 |
| Total Span | 81.54 | 82.06 |



| Comments |
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| QC15 Inspection | |
| Date | |

| Rev | Date | Change | Revised by | Approved |
|-----|----------|-----------------|------------|----------|
| A | 07.02.06 | New Issue | KJ/JM | |
| B | 10.08.23 | Dwg Rev updated | KJ | |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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NOTE: Date & initial all entries

| Item | Qty -241 | Part Number | Description |
|------|-------------|---------------|--|
| 1 | X | D350-748-241 | CROSSTUBE ASSEMBLY (AS 350/355 HI AFT) |
| 2 | 1 | D6015-125 | CROSSTUBE (OR D6018-125) |
| 3 | 2 | D3502-1 | SUPPORT |
| 4 | 2 | D2856-400-710 | ABRASION STRIP |
| 5 | 1 | AELS-1032-225 | INSERT |
| 6 | 1 | NAS1149D0363J | WASHER (OR AN960JD10) |
| 7 | 2 | MS21920-20 | CLAMP (PER DART SPEC. M-MS21920-20) |
| 8 | 1 | MS27039-1-10 | SCREW |

GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6015-125 OR D6018-125
FINISHED LENGTH = 122.700±0.06
- 2) FINISH: MAGNETIC PARTICLE INSPECT PER DART QSI 038 4.2
CADMIUM PLATE PER AMS-QQ-P-416B, CLASS 1, TYPE II
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: DART PART NUMBER "D350-748-241" AND BATCH NUMBER ON INSIDE OF CUFF
PER DART QSI 044 6.4 (VIBRATING STYLUS)
- 7) WEIGHT: 29.85 lbs
- 8) PART IS SYMMETRIC ABOUT CENTERLINE, EXCEPT FOR Ø0.297 HOLE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT ALL EDGES FROM MACHINING
LONGITUDINALLY, TRANSITION SHOULD BE SMOOTH. NOTE: ALL HOLES ARE DRILLED AFTER
BENDING.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 7 PASSES. MAXIMUM TUBE FLATTENING DUE TO
BENDING IS 6% BASED ON O.D.
- 11) HEAT TREAT TO MIN. 180 KSI PER MIL-T-6736 OR AMS 2759-1C AFTER TURNING. ACCEPTABLE TO
VERIFY TENSILE STRENGTH BY HARDNESS TEST PER ASTM E18 TO 40-45 HRC.
- 12) INSTALL D2856-400-710 ABRASION STRIPS WITH A GAP ON BOTTOM SIDE OF CROSSTUBE,
CENTERED OPPOSITE D3502-1 SUPPORT, PER QSI 035.
- 13) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE
OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES,
NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY.
CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE. WHEN DRILLING HOLES EXTREME CARE
MUST BE TAKEN AND CAREFUL DEBURRING PERFORMED TO ENSURE A CLEAN HOLE WITH NO
CRACKING/CHIPPING/GROOVES.
- 14) TORQUE CLAMPS 60 TO 80 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT
NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.
- 15) MAX TWIST AFTER BENDING: WITH XTUBE LAYED FLAT ON SURFACE, THE DIFFERENCE BETWEEN
CUFF HEIGHTS FROM THE SURFACE MAY BE NO LARGER THAN 0.25 (ZN C1-3).

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WITHOUT NOTICE

WORK ORDER
NO. 81521 MLJ

12/03/15

RELEASED
2011-07-08
JWP

| | | | |
|------|---|----|----------|
| F | ADD HRC TEST OPTION (B8-1) PER PAR 09-040, ADD TWIST LIMIT (A8-1, C1-3), ADD D6015-125 OPTION (C8-1), STOCK DIM NOW MACHINED (D1-4) | CP | 10.11.23 |
| E | REVISE GENERAL NOTES; UPDATE TO CURRENT STANDARDS; RELOCATED FLAG #6 PER PAR 08-046 (ZN A8-3); ADD TOLERANCES (ZN C6-3, D2-3) | RF | 09.09.30 |
| D | MAG. PARTICLE AND CAD PLATE AS MFD. | CP | 06.10.31 |
| C | ADD CAD PLATING | CP | 06.08.14 |
| B | ADD D6018-125 & PRIME AND PAINT | CP | 06.06.30 |
| A | NEW ISSUE | CP | 06.03.31 |
| REV. | DESCRIPTION | BY | DATE |

| | | | |
|------------|----------|--|--------------|
| DESIGN | Q | DART AEROSPACE LTD | |
| DRAWN | Q | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | is | DRAWING NO. | REV. F |
| MFG. APPR. | is | D350-748-241 | SHEET 1 OF 4 |
| APPROVED | is | TITLE | SCALE |
| DE APPR. | is | CROSSTUBE (AS 350/355 HI AFT) | NTS |
| DATE | 10.11.23 | COPYRIGHT © 2006 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD. | |

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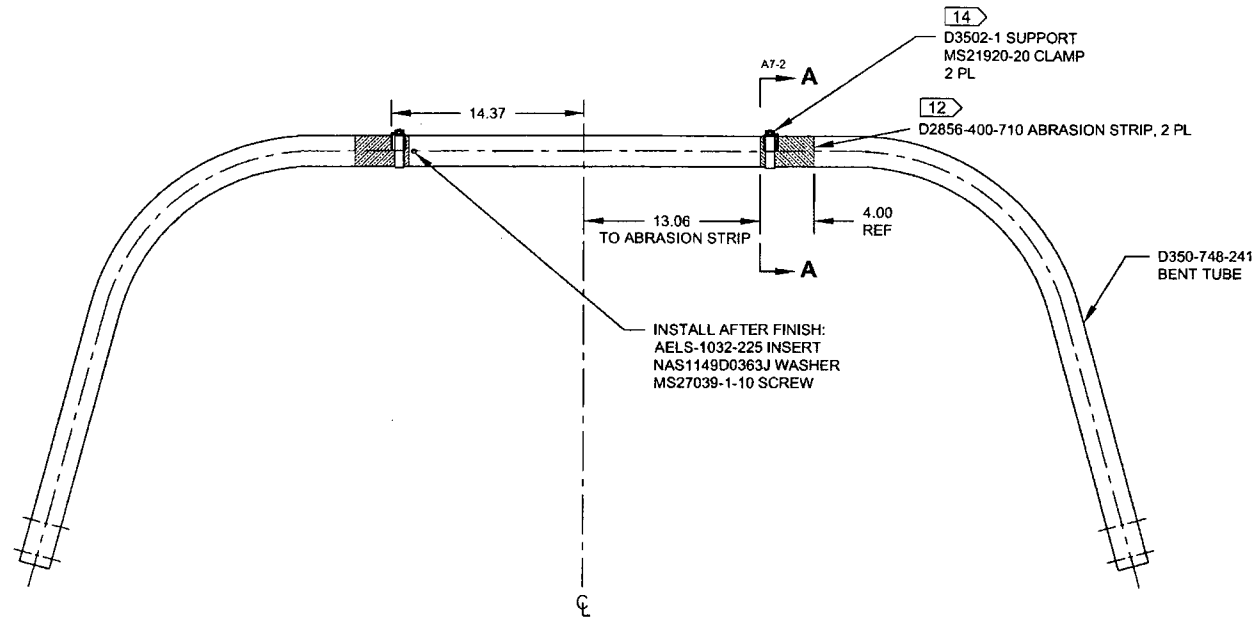
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

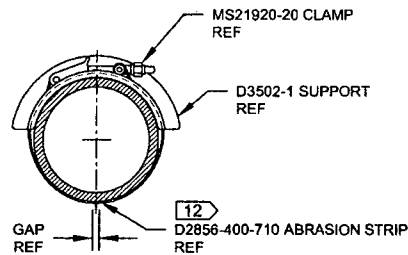
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NOTE: Date & initial all entries

81521



**D350-748-241
ASSEMBLY DETAIL**



SECTION A-A D4-2
SCALE 4X

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R 2011-05 19 D

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|------------|----------|--|--------------|
| DESIGN | 90 | DART AEROSPACE LTD | |
| DRAWN | 90 | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | 13 | DRAWING NO. | REV. F |
| MFG. APPR. | 13 | D350-748-241 | SHEET 2 OF 4 |
| APPROVED | 13 | TITLE | SCALE |
| DE APPR. | 13 | CROSSTUBE (AS 350/355 HI AFT) | NTS |
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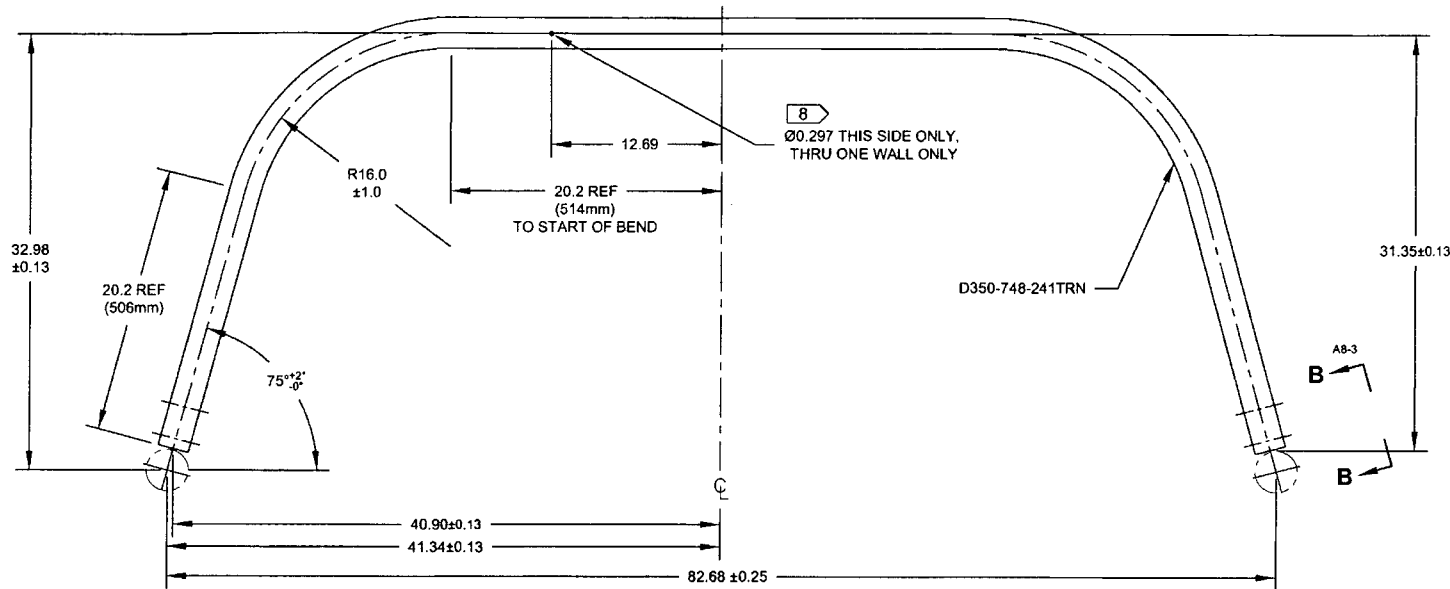
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

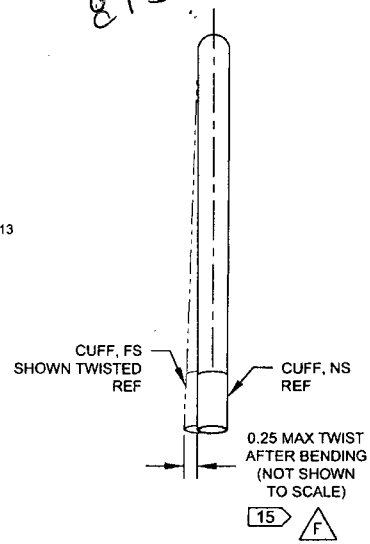
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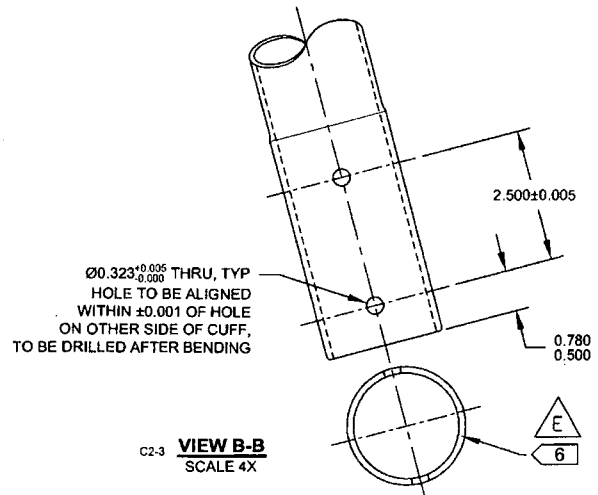


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D350-748-241
BENDING AND DRILLING DETAIL 10

RELEASED
2011-01-18



VIEW B-B
SCALE 4X

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| DESIGN | 92 | DART AEROSPACE LTD | |
| DRAWN | 92 | HAWKESBURY, ONTARIO, CANADA | |
| CHECKED | 92 | DRAWING NO. | REV. F |
| MFG. APPR. | 92 | D350-748-241 | SHEET 3 OF 4 |
| APPROVED | 92 | TITLE | SCALE |
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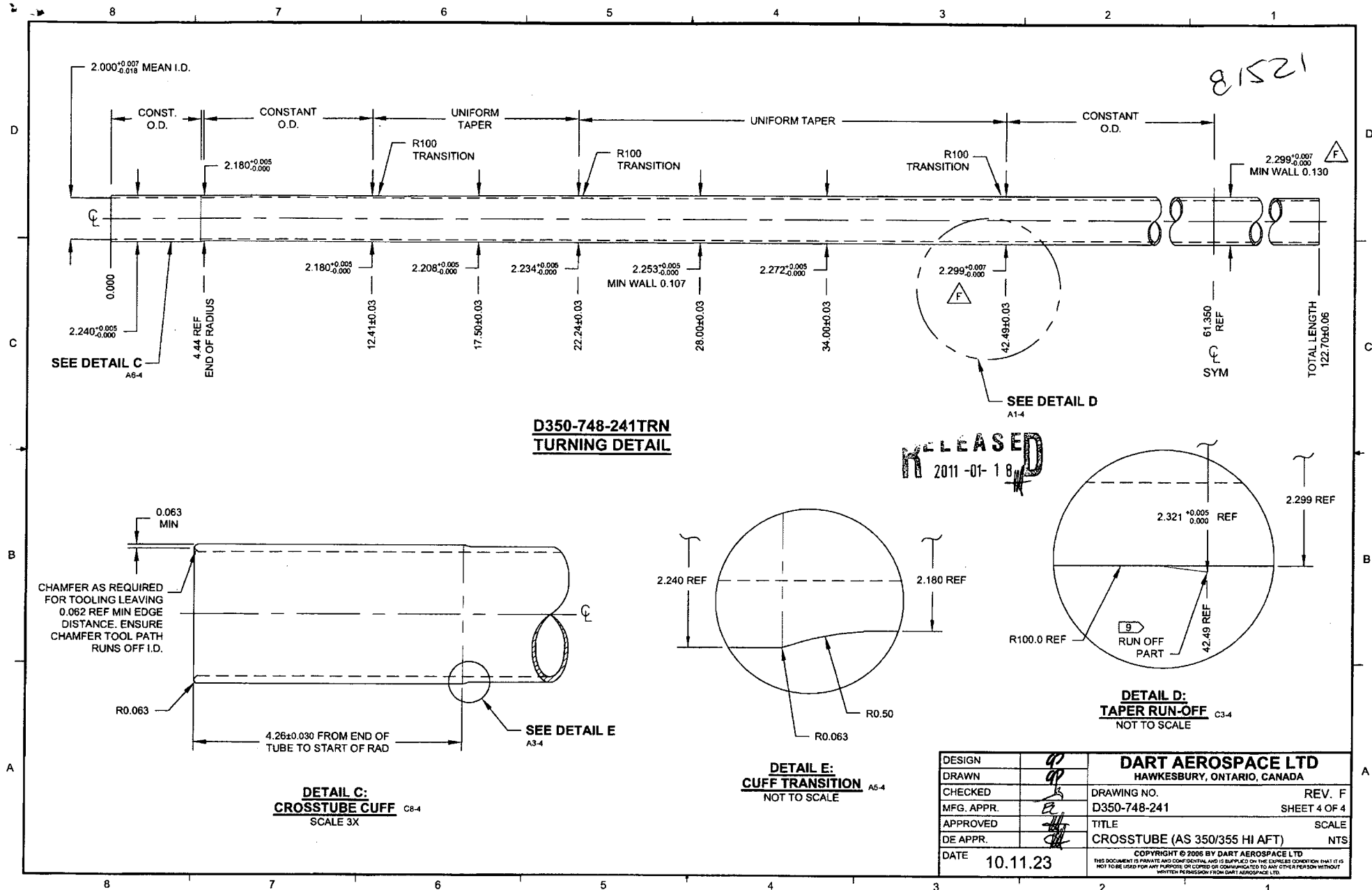
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